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ORIGINAL DEPARTMENT.

LECTURE.

EPIDEMIC CEREBRO-SPINAL MENINGITIS.

INTRODUCTORY REMARKS ON DISEASES OF THE SPINAL CORD.

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GENTLEMEN:—We were speaking yesterday of epidemic cerebro-spinal meningitis, a disease which I told you is a general disease, but with certain characteristic lesions, these characteristic lesions being an acute inflammation of the membranes of the brain and of the spinal cord, especially of the pia mater of the brain and of the spinal cord. I told you that we have no very exact knowledge of the causation of this disease. We do not know how it begins. We do know, however, that it occurs in epidemics, and that in any place where there has once been an epidemic the disease becomes endemic for a number of years. We know, also, that some of these epidemics are very much more severe and fatal than others. We know that in some epidemics only children are attacked, while in other epidemics both children and adults are attacked. We know, also, that the disease is not contagious.

When we came to the symptoms of the disease, we found that in the most malignant epidemics there are some cases in which the disease runs a course of only a few hours. The patients are attacked suddenly, while apparently in perfect health, with a rigor; they at once become unconscious; the unconsciousness goes on into coma, and they remain comatose until they die. In the more ordinary cases than these, however, we find that the disease runs a longer course, but that there is considerable difference in different epidemics, as to the way in which the invasion of the disease takes place. And even in the same epidemic patients may be first attacked in somewhat different ways.

In the first place, as to the suddenness of the invasion. Some persons will be attacked very suddenly. Having previously been in perfectly good health they become sick very rapidly indeed, so that in the course of a few hours they will be sick enough to be in bed. In other cases, however, there is a period of several days during which the patients are good for nothing, are uncomfortable, and yet are not sick enough to be in bed, and after the lapse of these few days we find that the disease goes on in its regular course.

When the disease is fairly established, we find there are certain symptoms which we can expect to get in all or nearly all the cases. Of these symptoms, headache, I told you, is a very constant one indeed. Headache is present in nearly all cases, but it varies very much in its intensity in the different cases. Delirium is also present in very many cases, but this also differs both in its duration and in its severity, in its violence, in the different cases. There is also a difference as to the time when it is developed; in some patients the delirium coming on early in the disease; in other patients the delirium not coming on until after the disease has lasted several days. The intelligence may be very much changed, or it may remain nearly normal throughout the disease; but even if the intelligence continues normal the temper of the patients is changed. They are peevish, irritable, restless,

different from what they are when they are well. Convulsions are common enough in children, but are not very common in adults. Vomiting belongs to the beginning of the disease; belongs to the first few days of the disease. And in some cases it is so frequent, so annoying, that it may mask other symptoms which belong to the invasion of the disease. The bowels are usually constipated, but there are exceptional cases in which there is diarrhœa. If there is diarrhœa, it is more apt to occur near the close of the disease.

The patients suffer from pain and tenderness in the voluntary muscles, especially in the voluntary muscles of the back of the neck, and along the vertebral column. Less frequently there is some pain and tenderness in the voluntary muscles of other parts of the body. In the muscles of the back of the neck and along the vertebral column there is not only pain and tenderness, but there is sometimes, also, contraction. The muscles are contracted so that the head is drawn backward, and the body is drawn backward. The skin also may be unnaturally sensitive. There may be hyperæsthesia of the skin, so that the patients complain on being touched. The ears are often affected, the patients becoming deaf during the course of the disease, and in some cases deafness remaining permanent after their recovery from the disease.

The eyes are affected; the patients suffer from photophobia, from conjunctivitis, sometimes from suppurative inflammation of the cornea, sometimes from suppurative inflammation of the choroid coat of the eye. The conjunctivitis usually involves both eyes. The choroiditis or the keratitis may involve either one eye or both eyes. Besides this there is also often contraction of one of the internal recti muscles, so that there is strabismus. Eruptions in the skin, cutaneous eruptions, are present in some epidemics, and absent in others. The eruptions, when they do occur, are not always the same; the eruptions in the different epidemics have not always the same characters. In some epidemics they have the character of an erythema, in other epidemics the characters of a roseola, and in other epidemics there are petechial spots in the skin. The tongue is at first coated with a white fur, but remains moist.

If the patient does not at any time become very sick, it may remain moist throughout the whole disease. If, however, the case is a severe one, the tongue gradually becomes dry, and as it becomes dry it becomes brown, and may resemble very closely the tongue of typhoid or typhus fever. The pulse is usually full and not very rapid until the close of the disease. It does not usually run over a hundred until the last few days of the disease; that is, the last few days of the fatal cases of the disease. While the disease is coming on the pulse is often quite slow. It may be even slower than in health. A person who has naturally a pulse of seventy may have a pulse of only sixty or fifty while the disease is coming on. This rule, however, is not an absolute rule, it is a general rule. There are cases of cerebro-spinal meningitis in which the pulse is more rapid than this throughout the whole course of the disease.

The temperature is usually not very high, except in the bad cases. The height of the temperature varies in the different cases with the severity of the disease, generally speaking. The higher the temperature runs throughout the whole course of a case so much the worse is the case. But, in any given case, the temperature will vary from day to day, and these diurnal variations of the temperature do not mark the progress of the disease. The continuation of a tolerably high temperature, of one hundred and three or one hundred and four, with a pulse of sixty or seventy, is always very good reason for thinking that the patient is suffering from meningitis. The particular kind of meningitis is to be determined by other circumstances. But in epidemic cerebro-spinal meningitis, as well as in the other forms of meningitis, this rule holds good; that the continuation of a high temperature and a slow pulse is good reason for suspecting the existence of meningitis. If the disease lasts for more than ten days, or for more than two weeks, the patients are very apt to pass into a typhoid condition. The tongue becomes brown and dry, the delirium is constant, the patients may lie in bed quietly, except for the disturbance produced by the delirium; they may pass the urine and the fæces involuntarily; the cheeks may become flushed, and the patients will present an appearance which is not to be distinguished from that of patients suffering with typhoid fever. This condition does not usually develop until after the patients have been sick for ten days or two weeks. The duration of the disease in the malignant cases is only a few hours; in the more ordinary cases of the disease it varies between a week and three weeks. The more severe cases run the shortest course, terminating fatally. Of the cases which die, a very considerable number die at the end of the first or of the second week. Of the cases which get well, the disease is apt to be protracted over

two or three weeks. In those cases which are to get well, you sometimes have a sort of relapse. Not as well marked a relapse, not as characteristic a relapse as we get in typhoid fever, but still a pretty well marked relapse. At the end of, say two weeks, the patient may be apparently doing quite well; the temperature may have fallen to the normal, or nearly to the normal; the delirium may have disappeared; the intelligence may be clear enough; the patient's appetite may have returned. After continuing this way for two or three days, the symptoms will return. The temperature will run up again; the delirium will come back; the patient will lose his appetite, and he will be in very much the same condition that he was before. There may be several of these moderate relapses, and then finally convulsions will be fairly established.

The disease is attended, not infrequently, with certain complications. Bronchitis is found in a considerable number of patients; pneumonia occurs occasionally, not as frequently as bronchitis; pleurisy is also observed sometimes; pericarditis occurs not very frequently, and so does endocarditis, leaving behind a permanent lesion of the valves in some cases. Deafness, which occurs during the disease, may continue after the patients have apparently recovered. The blindness which may occur, if it be due to structural changes in the eye, will, of course, be a permanent blindness. In a certain number of cases the patients do not get well, but go on to suffer from a form of chronic hydrocephalus. The ventricles of the brain become dilated. The inflammation of the pia mater subsides, but the ventricles become dilated more and more with serum, and the patients go on to have the symptoms which I have already spoken to you of in speaking of chronic hydrocephalus. In some patients who recover there is permanent impairment of the mental faculties. The patients remain in a partially idiotic condition. The mental condition is not as good as it was before the occurrence of the disease. With this there may be loss of speech; there may be aphasia. This feebleness of mind and aphasia are not always permanent. They may continue some months after convalescence is fairly established, and then will gradually disappear. I have at the present time under my care a young girl in whom this condition of things was very well marked. She suffered from an attack of cerebro-spinal meningitis last winter, or rather early last spring—in March. After recovering from the attack of cerebro-spinal meningitis, she was left completely aphasic, and very feeble minded indeed. This condition lasted during April and May, with very little change. Then in June it gradually began to disappear. The aphasia disappeared first, then the mental faculties gradually began to improve, and continued to improve during the summer and fall, and now the intellect is as good as it ever was. This case, however, presented another complication which has remained permanent; that is endocarditis. She suffered from endocarditis at the time of the cerebro-spinal meningitis This endocarditis has left a lesion of the aortic valve which did not exist before she was taken sick. You will remember, then, that the prognosis of the mental condition and of the aphasia is not necessarily very bad. The patients may continue in this condition for some little time, and then may gradually return to the normal condition. In some cases, also, there is left behind paralysis of some of the voluntary muscles, paralysis either of one arm or of one leg, or of a group of muscles. This paralysis, also, is not always permanent. It may last for a certain length of time and then the patients will gradually regain the power of these muscles.

The prognosis of the disease varies very much with the particular epidemic. There are some epidemics of the disease in which the prognosis is bad; a large number of the cases die. There are other epidemics in which the prognosis is very much better; in which the larger number of the patients get well. Generally speaking, when an epidemic is subsiding, the scattering cases which occur afterward run a comparatively mild course. The cases of cerebro-spinal meningitis which we see in New York now do not run a very bad course. The larger number of them run a pretty mild course and get well.

Now, as to the treatment of the disease. In treating the disease you have to remember what its real characters are. That it is at the same time a general disease, and that this general disease is attended with a characteristic local inflammation, and that as a result of this you have patients suffering from symptoms dependent upon two different causes. They suffer from the symptoms due to the general poison of the disease, and they suffer from the symptoms due to the local inflammation which accompanies the disease. So far as the general poison of the disease is concerned, our treatment is not of any particular efficacy. We do not know how to act upon the poison of cerebro-spinal meningitis, any more than we know how to act upon the poison of typhoid fever, or of typhus fever, or of smallpox, or of any of that class of diseases.

For the local lesion, however, we can do something, and for the symptoms produced both by the local lesion and the general disease, we may also do something.

In the first place, for the local lesion. The indications for the local lesion are the same as they are for an acute meningitis of an epidemic or idiopathic kind. Thus, at the very commencement of the disease we may use local blood letting and cold. Local blood letting is only to be employed in persons who are strong and robust. You take the blood from the temples, or the nape of the neck, and from the upper part of the spine. You take the blood either by means of leeches or by wet cups. This, however, should only be done during the first three or four days of the disease. We should not do it after the fourth day of the disease. If you do not see the patient until after that time, there can be no object in local blood letting. Cold is applied to the head and to the back of the neck by means of ice-bags, and the application of cold is kept up pretty continuously. It should be kept up as continuously as possible for the first days of the disease; I think we may say for the first week of the disease, in a considerable number of cases. These two means, the use of blood letting and the use of cold, are the most efficient agents that we have for controlling the local inflammation. These agents, I say, are only efficient during the beginning of the disease, the blood letting during the first two or three days, the cold during the first week of the disease.

In addition to this local treatment, we have also to use measures to make the patient more comfortable. The symptoms which trouble the patient most are, usually, headache, restlessness and delirium. These symptoms are generally best quieted by the bromide of potash. The bromide of potash given alone, or with chloral, or with hyoscyamus, or with one of the preparations of musk, or with the tincture of castor. There are very few patients with whom the bromide cannot be used. There are very few patients who are not tolerant of the bromide. You give this in doses of twenty or thirty grains every three hours. The bromide will often be rendered more efficient if you combine with it one or other of the drugs of which I have spoken. The chloral hydrate is one of the best of these drugs. Unfortunately, there are some patients who cannot take chloral, in whom it produces unpleasant symptoms. In patients who can take it, usually ten grains is a sufficient dose to be given, combined with the bromide. In patients who cannot take chloral you will find the tincture of hyoscyamus often of very good service, and you give this in drachm doses with the bromide, making a mixture containing both the bromide and the tincture of hyoscyamus, so that the patient takes twenty grains of the bromide and a drachm of the tincture of hyoscyamus at each dose. Then, in patients, especially women, in whom the restlessness takes on the hysterical character, it has seemed to me that there is advantage in using the tincture of castor. You give this in the same doses as the tincture of hyoscyamus, that is, in drachm doses every three hours. You give it, then, in considerable amount. Occasionally we have to resort to opium. You find that neither the bromide nor the other drugs will answer the purpose, but, if possible, you use one or other of these rather than opium. Quinine is not, I think, indicated in this particular disease. Quinine is now given almost as a matter of routine for every disease from which patients suffer, but unless you give it as a matter of routine I think there is no particular advantage in giving it in cerebro-spinal meningitis. The temperature usually requires no particular attention. It does, indeed, sometimes run pretty high, but this is usually only toward the close of the disease, when there is no particular advantage in any treatment; but during the ordinary course of the disease the temperature is not apt to run over 104° in adults, and a temperature of 104° in adults is, in my opinion at least, a very harmless temperature. I think that adults bear a temperature of 104° for a considerable length of time without any danger whatever. If, however, you are disposed to attempt to lower the temperature, the best way to do this is by means either of cold effusions or of cold or tepid baths, or of the cold pack. Quinine has no effect whatever in reducing the temperature in this particular disease.

In children, cerebro-spinal meningitis runs a little different course from what it does in adults. The diagnosis is by no means as easy, especially if the children are quite young. The invasion of the disease is as a rule acute, and the invasion is very apt indeed to occur with convulsions. The patients have a number of convulsions, and these convulsions may be repeated at intervals during the first twelve, or twenty-four, or forty-eight hours, of the disease. Then the convulsions disappear, but the child continues dull, stupid, drowsy; you can hardly say, however, comatose, but it takes no notice, or very little notice of what is going on around. The temperature runs up pretty high from the very commencement of the disease. It runs higher than it does in adults.

The child will have a temperature of 104° by the end of the first twelve or twenty-four hours, and the temperature will continue between 104° and 106° or 107°, during the rest of the disease. In children, these may be the only symptoms that will present themselves to you. The occurrence of repeated convulsions, followed by a peculiar condition of stupor, and with this well-marked febrile movement. These, I say, may be the only symptoms that these children will present, and in this stupid condition, with well-marked febrile movement, the patients will continue until they die; or the stupor will gradually disappear, the febrile movement will gradually diminish, and the patient will get better. The disease, however, is much more fatal in these young children than it is in adults. And you will find a considerable number of these cases in young children in which it is impossible for you to tell whether the children are suffering from epidemic cerebro-spinal meningitis, or from acute idiopathic meningitis, or from acute meningitis secondary to suppurative inflammation of the ear, or tubercular meningitis. All these different forms of meningitis may give you symptoms which are exactly the same in these children.

The indications for treatment in children are the same as in adults, only in these young children you never think of local blood-letting.

We come now to the consideration of diseases of the spinal cord. If we make a transverse section of the spinal cord, we see at once that it consists of two parts, one of these parts we call the gray matter, the other the white matter of the cord. The gray matter is arranged in what are called horns, or cornua, and we speak of these according to their situation—of the anterior horns of gray matter, and the posterior horns of gray matter. The white matter of the cord is arranged in what are called columns, in columns beginning at the brain and running the whole length of the spinal cord, and of these columns, according to their position, we speak of the anterior column, the posterior column, and the lateral column. All these divisions of the cord it is particularly necessary for us to remember. That is, that the cord is composed of gray and white matter, that the gray matter is arranged in horns, or cornua, of which we distinguish the anterior and posterior, and that the white matter is arranged in columns, of which we distinguish the anterior, the posterior, and the lateral columns. And, as you know, of course, we have the anterior nerve root connected with the anterior gray cornua, and the posterior nerve root connected with the posterior gray cornua.

There are some points in the physiology of the spinal cord which it is necessary to have in our minds when we come to the consideration of the diseases of the cord. We know that impressions which are received by the sensitive nerves of the body, by the peripheral sensitive nerves, are carried to the posterior roots. From the posterior roots to the posterior gray cornua, and from these to the posterior and lateral white columns, thence to the brain. Sensitive impressions pass first, I repeat, to the posterior nerve roots, then to the posterior gray cornua, from the posterior gray cornua to the posterior and lateral white columns up to the brain. The posterior white columns are the channels for the sensations of touch, or pressure, and of temperature. The sensations which we designate by the names of touch, or pressure, and of temperature are carried by the posterior white columns to the brain. But the sensations of pain, as distinguished from the sensations of touch, pressure and temperature, are probably transmitted to the brain through the gray matter of the cord. It is not absolutely certain, but it is exceedingly probable that we can distinguish these two channels by which the different sensations of touch, pressure, temperature and pain are conveyed from the periphery of the body to the brain. The lateral, and perhaps also the anterior columns of the spinal cord, transmit voluntary motor impulses from the brain to the anterior cornua. The anterior cornua of the gray matter have the power of regulating the voluntary muscles. They regulate the impulses which are transmitted from the brain to the voluntary muscles. The centres for the coördination of the different voluntary muscles are probably situated in the brain, and the impulses from these centres of coördination are transmitted through the posterior white columns. What is called reflex motion as distinguished from voluntary motion is produced by the gray matter of the cord. But these reflex motions are normally controlled by the brain. If the influence of the brain is taken away then these reflex motions which belong to the spinal cord will no longer be controlled. They will become exaggerated. These are the points which it is necessary for us to remember in thinking of diseases of the spinal cord.

Now, there are also some general symptoms belonging to a number of different diseases of the spinal cord, which we also have to remember. You may think this a little hard, gentlemen, but it is important if it is hard. Of these general symptoms we know, in the first place,

that disturbances of sensation are due to lesions of the gray matter of the cord and of the posterior columns. If a person has any disturbance of sensation, that is any disturbance as to his sensitiveness to heat, to cold, to pressure, to tactile sensation, to pain, we know that there must be some lesion either of the gray matter of the cord, or of the posterior white columns of the cord, or of both these. Some persons will tell you that their skin feels too cold, others that the skin feels too hot, others that they have a feeling of numbness of the skin, others that they have a feeling of pricking or of formication in the skin. We do not know to what part of the spinal cord these unnatural sensations are to be referred. It is important to remember that these peculiar sensations, which are very common indeed, are as yet not to be definitely located in any particular part of the spinal cord. If the patients suffer from well marked neuralgic pains, these neuralgic pains are due, so far as we know, to changes in the posterior nerve roots, to the nerve roots which are given off from the posterior gray cornua. Our knowledge on this subject, however, is not exact, we can only say that, so far as we know, neuralgic pains connected with spinal cord diseases are due to changes in the posterior nerve roots, rather than to any change in the cord itself. The generalized pains from which some patients suffer—not neuralgic pains, but general pains in different parts of the body—these again belong to the class of uncertain symptoms. We do not know what particular part of the cord it is which, when it is diseased, gives rise to these generalized pains.

Paralysis of the voluntary muscles, when it is rapidly followed by atrophy of the muscles, is due to disease of the anterior horns of the gray matter, or to disease of the anterior nerve roots. If paralysis of the voluntary muscles is accompanied with permanent contraction, and there is no atrophy of the muscles, then we can usually infer that the lateral columns of the cord are the seat of the lesion. If there is first loss of voluntary motion, then permanent contraction of these paralyzed muscles and at the same time marked atrophy of the muscles, then we may infer that the lateral white columns of the cord are diseased. If the patients suffer from tremor of the voluntary muscles, from a peculiar agitating movement of the voluntary muscles, as we see in certain cases of paralysis agitans, as it is sometimes called, this is due, as a rule, to what is called multiple sclerosis. That is, to a number of different foci of lesions in the spinal cord. There may be at the same time similar foci of the lesion in the brain. If the patients suffer from diminished reflex action it is usually due to disease either of the anterior nerve roots, or the posterior nerve roots, or the gray matter of the cord. If there is exaggerated reflex action, instead of diminished reflex action, it is due to some lesion which interrupts the natural channels of communication from the brain to the cord. If, for example, a patient fall from a height, and dislocate one of the cervical or one of the dorsal vertebræ, so that the cord is completely compressed, you will find that this patient will have exaggerated reflex action of those parts of the body below the seat of the injury. The controlling power of the brain being shut off by such a lesion of the cord, the reflex action of the cord becomes exaggerated. We see the same thing in many transverse lesions of the spinal cord. Any lesion which destroys or which renders useless a certain part of the spinal cord will be liable to produce increased reflex action of those muscles which are supplied by nerves coming off from the spinal cord below the seat of the injury. At our next lecture we will take up the subject of myelitis.

COMMUNICATIONS.

CHRONIC INTERSTITIAL NEPHRITIS.

A Case Reported to the Northern Medical Society of Philadelphia,

BY J. G. HEILMAN, M.D.

G. W. R., aged 53 years, salesman in a wholesale dry goods house, of regular habits and good family history. Had several attacks of acute articular rheumatism previous to coming under my observation, but there do not seem to have been any cardiac complications; at least, the heart, when he came under my care, was normal in size and free from murmurs. For years his skin has been pale, and he complained of weakness after even moderate exertion. As he was a near neighbor he was seen almost daily during the past six years, but aside from the fact that he was not very strong, my attention was not called to any thing special in his condition until Aug. 5th of the present year (1880).

At this time he had a severe attack of cholera morbus, attended with severe cramps in the calves of the legs. The attack had lasted eight hours when I saw him, and he was very greatly prostrated. A hypodermic injection of half a grain of sulphate of morphia gave almost immediate relief. He went to sleep twenty minutes after the injection had been given, and rested com-

fortably all night. The next morning he was doing so well that nothing further than ordering tonic treatment was deemed necessary. He gained strength very slowly, however, and on the 22d of August, sixteen days later, he again consulted me. I found him suffering from a moderately severe attack of remittent fever, which yielded to treatment in about a week's time. Dr. Charles N. Cook, owing to my absence from the city, saw him during a portion of this time, and confirmed the diagnosis. After leaving his bed he complained of great weakness, and restlessness at night, with some headache. His appetite was not as good as usual during convalescence from an acute disease. Tonics, consisting of quinine, iron and strychnia, were freely given, but without any apparent effect. He remained in very much the same condition, gaining strength a little, until September 16th, when he walked out. During the walk his strength gave out completely, and although he walked less than three blocks it was only with the utmost exertion that he succeeded in reaching his home. His debility now became greater, and his headache and restlessness were very much aggravated. During the progress of the disease frequent inquiries were made concerning his urine, but he had observed nothing abnormal either as to frequency of voiding, color, or quantity. I now obtained a specimen, and on examination found it to be about half albumen. My friend, Dr. F. S. Isett, kindly submitted it to a microscopic examination, and found granular casts and oil globules. The patient now, for the first time, admitted that his eyesight had been gradually failing for a year past, and that especially rapid had such failure been during the past six months.

Dr. D. M. Barr saw the case several times with me, in consultation, but in spite of all treatment it progressed rapidly to a fatal termination.

Twitchings of the muscles of the hands and legs and of the face appeared and continued throughout, though no general convulsions occurred. He was delirious most of the time, seldom recognizing the members of his family. The treatment consisted of tonics, iron, quinine and strychnia, digitalis, ergot and tincture of cantharides.

The amount of albumen diminished under this treatment to one fourth. When uræmic symptoms became marked the compound powder of jalap was administered, in fifteen grain doses every two hours, with temporary relief. The restlessness was relieved with chloral hydrate and morphia, in doses of one-eighth of a grain. Cupping over the region of the kidneys gave considerable relief. The action of the heart was feeble, but no murmurs could be detected at any time. Death took place September 23d.

Several facts connected with the case are worthy of note. The common belief that opiates are badly borne in Bright's disease is not supported by the history of this case. The dose of one half grain given hypodermically, before the existence of kidney disease was suspected, had a most happy effect, and the dose of an eighth of a grain was frequently repeated up to the day of his death, without exerting the slightest injurious effect; indeed, he always seemed stronger after a sleep produced in this manner.

The effect of severe exertion in aggravating the symptoms was well illustrated by this case. The disease had undoubtedly existed for not less than two years, but at the beginning of the present year, a portion of work much more laborious was assigned to him, and at once his eyesight commenced to fail more rapidly, his headaches became more frequent, and his debility more marked. The very rapid progress of the disease after the severe exertion of the walk while convalescing from remittent fever illustrates the same fact.

The entire absence of dropsy, even with the urine one-half albumen, is another fact worthy of notice. This, together with absence of other symptoms pointing to the kidneys as the seat of disease, explains why the diagnosis was not sooner made. It must be remembered that the disturbance of vision and the frequent headaches were not complained of, or their existence even admitted, until after the albumen had been found in the urine. The pulse and temperature were almost normal until a few days before death, when the pulse gradually became more frequent and feeble. They showed the usual changes while suffering from remittent fever.

An autopsy was made fifty-six hours after death, but only the cavity of the abdomen was opened. All the organs with the exception of the kidneys, were found normal. The right kidney showed more disease than the left, and was presented to the chairman of our committee on morbid specimens who will make a report of its pathological condition.

REPORT OF COMMITTEE.

The kidney presented by Dr. Heilman appears externally of nearly the normal size. It has a large collection of fat about and within the pelvis, infiltrating the lower part of the cones to such an extent that the lower third appeared to be

made chiefly of fat. The capsule is not abnormally adherent. Upon section, the cortical portion appears much diminished in thickness, about half the usual width. A thin section under the microscope shows an increase of the connective tissue, which is more marked about the Malpighian bodies and blood vessels. The tubules are in places filled with hyaline matter, some of which encloses detached epithelial cells, *i.e.* hyaline and granular casts, *in situ*. The specimen is, therefore, one of red, granular contracted kidney of the older authors, or chronic interstitial nephritis of more modern nomenclature.

Two distinct pathological conditions have long been recognized as being the result of chronic Brights' Disease; the large white kidney and the red contracted kidney; and the question has often been asked, do these represent different stages of the disease, or two distinct diseases?

The weight of pathological evidence, to-day, seems to be on the side of their being two distinct pathological processes *ab initio*, one beginning in the connective tissue about the blood vessels, the other in the renal tubules.

If this be true, there ought to be a distinct clinical history and line of treatment appropriate to each.

The complete history of the present case is, therefore, a step forward toward the settling of this vexed question.

The specimen was exhibited with a section under the microscope.

DIPHTHERITIC CROUP.

BY J. M. BATTEN, M.D.,
Of Pittsburg, Pa.

Pseudo-membranous, membranous or diphtheritic croup has been, from time immemorial, considered a very grave and fatal disease. It is my opinion that the two diseases, membranous and diphtheritic croup, are distinct diseases, and require, in many cases, distinct treatment. It is possible to confound the one disease with the other; for, on account of the great fatality of the diseases, we are not often offered an opportunity of studying their sequelæ.

Diphtheritic croup is a constitutional disease with local symptoms and sequelæ of albuminuria, paralysis, debility, and perhaps heart paralysis. Membranous croup is a hyper-fibrination of the blood; children teething, with a large amount of fibrine in the blood, are likely to be attacked with membranous croup; besides, the latter disease has no sequelæ. I will not, however, stop to discuss the pathology of the disease, but will pass on to give you the history and treatment of a case of diphtheritic croup.

The case I am about to relate is a good type of the disease, and presented all the symptoms which might indicate a fatal termination.

I saw James H. W., aged 6 years, on November 2d, 1880. He had been sick about a week, with what the mother stated was a bad cold. Upon examination, the throat was red, with a patch of membrane behind each tonsil; the tonsils were not very much enlarged, the sub-maxillary glands were slightly enlarged, the tongue was coated, the breathing was labored and abdominal; there was aphonia; the cough was dry and had a ringing, whistling sound; the patient had been restless the previous night. I immediately imparted my opinion to the family that the case would likely terminate fatally. I put the child on No. 1:—

℞. Bromid. potass., gr. l
Chlorat. potass., gr. l
Tinct. aconiti rad., gtt. xij
Syr. tolutani,
Syr. senegæ, āā ℥ ij
Aquæ, ℥ iss. M.

Sig.—A teaspoonful every three hours.

The following day the symptoms, if anything, were more grave; the child had perspired freely after having been placed in bed, in a warm, comfortable room. The eyes were glassy and ejected, breathing difficult, head thrown back. Countenance anxious, pulse 110 to 120. Respirations frequent: a dry mucous râle in both bronchia. The case was not one favorable for tracheotomy, for the membrane ramified the trachea and bronchia and bronchial tubes of both the lungs. I continued the treatment till evening, with the addition of inhalation of lime steam, or steam from lime, when I put the patient upon No. 2:—

℞. Chloratis potass., gr. lxxx
Tinct. ferri chlor., gtt. clx
Syr. simplicis, ℥ ss
Aquæ, ℥ iss. M.

Sig.—A tablespoonful every three hours.

and withdrew the first prescription.

I kept the patient on this until Friday morning, November 5th, with inhalation of steam from lime. There was no improvement; the father stated to me that the patient could not swallow the medicine during the previous night. I then put him on No. 3:—

℞. Hydrarg. chlor. mit., gr. iv
Pulv. ipecac., gr. ij
Albi sacch., gr. xx. M.
Ft. chart. viij.

Sig.—One powder every three hours.

I told the father to give the second prescription as often as possible.

In the afternoon the patient commenced expectorating a thick, tenacious, muco-purulent matter, a half pint in quantity; after this the patient commenced to breathe easily, the cough became loose, expectoration easy, and he went to sleep for the first time since the night of November 1st (Monday night). The patient is now rapidly convalescing; has not regained his voice. During the little patient's sickness I gave whisky and nourishing diet freely. On examining the urine, November 7th, I found it loaded with albumen.

I continued the treatment with prescriptions No. 2 and No. 3, until November 8th, when I dropped the No. 3, the calomel, and continued No. 2, tinct. chlor. of iron, etc.

Now, the question may be asked was it prescription No. 2 or No. 3 that benefited the patient. I believe it was prescription No. 2, together with the inhalation of steam from lime; but the calomel, if it did no good did no harm, and took the place of prescription No. 2 when the child could not swallow. Now, this was an interesting case, and is the fifth patient with this disease, diphtheritic croup, I have seen, all of which died except the latter; and if no sequelæ should arise to endanger his life, I think my patient will convalesce rapidly. Throughout the disease my little patient was very restless, gasping for breath, and wanted to be fanned.

Hospital Reports.

PENNSYLVANIA HOSPITAL.

SERVICE OF DR. THOS. G. MORTON.

REPORTED BY GEO. F. SOUWERS, M.D.

Case of Traumatic Tetanus, Recovery.

GENTLEMEN:—I present to you this morning a rather rare, not to say a curious case. Tetanus is at any time an interesting disease to consider, as much from its comparative rarity as from the peculiar phenomena presented and the unsatisfactory, and not unfrequently from the opposite forms of treatment. The boy who is before you is thirteen years of age; was knocked down by a slowly moving train of cars; in some way unexplained, instead of being run over by the wheels he was thrown up on the axle, and dragged in this position. On being admitted to the hospital (on the 22d of September, 1880), he presented the following injuries; the scalp covering the occipital bone was entirely torn away, and hung down upon the neck; the skull was entirely denuded of its pericranium, and was also much roughened from the sand and slag on the railroad bed, which was literally ground into it and into the torn tissues. There must also have been a squeezing force, as the left clavicle was fractured at its middle, and the second, third, fourth, and fifth ribs of the left side had started from their articulations with the sternum; some few of the ribs on the right side had also been fractured; the right shoulder and the body presented formidable contusions. There was profound shock, and reaction came on slowly after the use of stimulants, and hot beef tea, and rest. To reduce the fracture of the clavicle, the patient was placed on his back and the arm placed across the chest and bandaged. To the scalp injuries a dressing of carbolized lint was applied, after being thoroughly washed with carbolized water, in order to remove, as far as possible, the debris, etc., the result of the accident. Up to the 24th the system responded but slowly to treatment; at first it seemed as if the long scalp flap would slough, but at this date, while there has been a great deal of suppuration there has been no sloughing. No tension whatever had been made to keep the flap in position. On the 23d ultimo he commenced with symptoms of trismus, which rapidly developed; marked opisthotonos finally made its appearance. The whole muscular system was implicated at this time, and morphia was employed hypodermically, and conia in one-fourth drop doses, gradually increased to one-half drop, was given every two hours. Under this treatment he gradually but very slowly improved, until now he is able to be out of bed. There remains, however, some slight irritation of the neck and facial muscles, which prevent the patient's turning the head freely; in fact, the head is more or less rigidly fixed, and turned slightly to the right, for which symptom he is now receiving large doses of the bromides, coupled with a tonic course of treatment. I bring the case before you, gentlemen, to show you the good results which I have seen from conia, which has proved in my hands very satisfactory. Recovery, under the most favorable circumstances, is rare in the adult, while in youthful subjects trismus and death are almost synonymous terms.

In this case, subsequently, a large portion of the superficial table of the occipital bone was removed by Dr. Morton; the granulations underneath were exceedingly florid and healthy—and at this date, December 1st, the boy is sufficiently well to be able to leave the hospital.

Medical Societies.

CLINICAL SOCIETY OF MARYLAND.

Meeting held November 19, 1880, THOMAS S. LATIMER, M.D., President, in the chair.

Reported by EUGENE F. CORDELL, M.D.

Polypoid Tumor from the Neck.

Dr. Michael exhibited a small tumor, about the size of an acorn, removed from the neck of a boy aged 8 years. The history showed that the patient had a wart upon the neck, and that his parents, with a view to getting rid of this, had tied a string tightly around its base. The result was that it grew to the size above mentioned, presenting the appearance of a mucous polypus attached to the surface by a pedicle. Dr. Michael

clipped it off with scissors. The hemorrhage was insignificant. At his request it was referred to the Committee on Morbid Growths.

Diabetic Urine Remaining Unchanged for Several Months.

Dr. McKew exhibited a specimen of urine obtained last May, from a patient suffering from diabetes, which, although kept upon his desk for six months, and frequently exposed to the air, showed no signs of decomposition, but was still clear and without unpleasant odor. It was obtained shortly before the death of the patient, whom he had only seen in consultation. The specific gravity was 1.025, reaction acid. On passing it through filtering paper a very slight sediment was obtained, which had not yet been examined. He was entirely at a loss for an explanation of the remarkable preservation of the specimen, unless it were possible for the salicylic acid, which the attending physician had been administering, to have had something to do with it. In answer to a suggestion that alcoholic fermentation may have occurred to some extent, Dr. M. said this was negatived by the fact that the specific gravity had remained unchanged. The quantity of the specimen was too small to admit of examination for alcohol.

Benzoate of Sodium in Hooping Cough.

Dr. J. Shelton Hill had tested this remedy in several cases, one being his own child, aged 3 years. There was no diminution of the frequency of the paroxysms, and their intensity was little, if any, lessened. It promptly checked the vomiting, however, which in one case was incessant, everything taken in the food being immediately ejected and nutrition being seriously impaired in consequence. The dose employed in the child of three was ten grains every three hours.

Some of the Errors in the Diagnosis of Eye Diseases into which General Practitioners are most Apt to Fall.

Dr. Theobald began his paper by remarking that it is not surprising that general practitioners make mistakes, since they make no use of some of the essential means of diagnosis. Oculists would meet with the same fate if deprived of their ophthalmoscopes, test-types, etc.

The importance of a correct diagnosis was illustrated by a reference to glaucoma and iritis, which, if improperly understood and treated at first, produce irremediable effects. Two cases of glaucoma, mistaken for cataract by the family physician, have come under his observation, in which delay was advised, and the sight, in consequence, lost. Glaucoma is often difficult to recognize in its incipiency, but when fully developed this becomes easy. Reliance must be placed upon increased hardness of the balls, which can be determined by a comparison with the physician's own eye or with the healthy eye of the patient. Require the patient to look down during the examination. Any increased tension should cause at once a resort to the ophthalmoscope. Iritis is liable to be mistaken for conjunctivitis, and treated with astringents, when atropia should be employed.

The books are, in a measure, to blame for this, because of the undue importance which they attach to the difference in the character of the injection of the eye in these two affections, as a distinguishing feature. Pain and photophobia, especially in adults, suggest iritis in these cases. The mobility of the pupil is an important feature, and should be examined into. In conjunctivitis this is in no wise impaired. Should the question of mobility be in doubt, atropia should be resorted to (gr. j–℥j, ordinarily a sufficient strength), which will establish the diagnosis beyond a doubt. The use of *oblique illumination* is equally conclusive, and every physician should be familiar with this simple method of examination. The requisites are very simple—a dark room, a bi convex lens, and a gas or lamp light. We may thus examine the structures of the ball back to the anterior layers of the lens; this method is also applicable in examining for foreign bodies, ulcers of cornea, etc. Myopia, hypermetropia and astigmatism present great difficulties to the general practitioner. Cases of chronic blepharitis, conjunctivitis, headache, etc., often depend upon these abnormalities, and can only be relieved by the use of suitable glasses; we should bear in mind the possibility of such a relation, and resort to glasses if we have any reason to suspect its existence.

Foreign bodies are often overlooked. In a case of foreign body which had been lodging in the cornea for several days, the attending physician had seriously contemplated the use of mercury. In another case, nitrate of silver was applied.

Affections of the nasal duct and lachrymal sac produce conjunctivitis, the cause of which may be overlooked. Of course, no treatment here will avail, except one directed to the source of the trouble.

The distinction between catarrhal ophthalmia and scrofulous ophthalmia is, that in the former the cornea is not involved, the redness is diffuse, and there is but little photophobia or lachrymation, whereas, in the latter the cornea is usually involved, there is great photophobia and lachrymation, and the injection is most marked in the vicinity of the phlyctenulæ. The general condition of the patient has also an important bearing in this differentiation.

Dr. Michael said that one source of error (at least in his experience) had been omitted in the paper, *i.e.*, ciliary spasm, which tends to confuse those first attempting to apply glasses. He found it necessary to paralyze the accommodation with atropia before resorting to the optometer for the determination of the proper glasses, which is the method pursued at the Presbyterian Eye Hospital.

Dr. Theobald replied that general practitioners are not likely to attempt to apply glasses. Furthermore, spasm, to judge by his own experience, is extremely rare. In hypermetropia, at least, he would be at a loss to know what glasses to order if the muscles of accommodation were in a state of paralyzation. He never uses the optometer, believing it to be unreliable. It causes convergence of the axes of the eyeballs, even if one eye is examined at a time, and accompanying this there occurs an associated movement of accommodation, which causes hy-

permetropic patients to appear myopic. By testing with parallel optic axes at 20′ this mistake can be avoided.

Dr. Morris related a case of a lady of this city who was sent on by her physician to New York, to consult two eminent oculists of that city, for some obscure eye trouble. After their examination she overheard one of them say that her trouble was only hysterical. Thereupon she returned to Baltimore and Dr. Morris took her to see a specialist here, who declared that she was suffering from serious glaucoma and would lose her sight unless relieved by an operation. Iridectomy was therefore performed on both eyes. She has been well ever since.

In another case the oculist sent the patient back to Dr. Morris, saying that there must be some uterine trouble, which was confirmed upon vaginal examination.

If there be a relationship between affections of the uterus and eye we ought to know it.

Dr. Theobald had no doubt of the relationship, but had no personal experience to offer. He had had patients with asthenopia who had said they had uterine disease, but he had always been able in these cases to ascribe it to other satisfactory causes. He related a very remarkable case of apparent blindness in a *hysterical* young lady, the daughter of a physician, who became suddenly completely blind in both eyes. She was treated by local blood-letting, etc., but not improving, was sent to Baltimore to see him. Nothing was to be seen upon ophthalmoscopic examination. Her pupils acted normally, and she was in excellent health. Asafœtida tea, a wineglassful, warm, every half hour, was ordered; in two days she was well. There was no evidence of uterine trouble in the case. He has known functional disturbance of the eye to coincide with nocturnal emissions.

Dr. Erich had not been able to establish the relation referred to. In hysterical aphonia the suggestion of an emetic generally suffices, if made with positive assurances that it will be administered immediately if the patient do not speak out. The impression on the mind secures relief. The troubles of hysterical patients are not simulated, they depend upon a species of insanity. The battery produces a powerful effect upon hysterical women. It is employed at the Maryland Women's Hospital to keep such patients quiet; should it fail to do this, some organic affection is suspected and sought for.

Dr. Browne had seen many patients affected with uterine troubles suffer from asthenopia, but had always thought the general bad health was sufficient to account for it.

Dr. Hartman had always found hysterical aphonia associated with anæmia and debility, the patients being generally shop girls, school teachers, etc. The best remedy is the battery, a shock of which rarely fails to cause them to shriek out.

BALTIMORE MEDICAL AND SURGICAL SOCIETY.

Croup.

Dr. Coskery. Last Wednesday week I performed tracheotomy for membranous croup, on account of obstruction of the tube from blood, etc. I used suction four times before it was free. The child died eighteen hours after. Three days after the operation I suffered with all the symptoms of diphtheria, fever, prostration, patches on the tonsils and fauces, etc. These symptoms lasted several days. As I got well my child was taken with similar symptoms, and for three or four days was quite ill, but got well. I have been at a loss to know what to call these cases. I do not think they were true diphtheria, on account of the prompt recovery and lack of sequelæ; but think I was poisoned and am sure my child was. I do not believe in the identity of croup and diphtheria.

Dr. Scarff. I think a large majority of the cases of true croup can be cured if treated promptly. I have had a number of cases and have only lost two. I do not think croup is the sequelæ of another disease, and believe the false membrane is very seldom the cause of death, as is shown by the persistence of the dyspnœa after the removal of the membrane by emetics. The treatment I use is an emetic dose of turpeth mineral, repeated in ten or fifteen minutes, if necessary. I think it is more certain and not so depressant as tartar emetic. I follow with tinct. aconite rad., or tinct. verat. vir., given every hour, watching the effect. Hot sponges are applied unless great suffocative dyspnœa from contraction of the muscles. If the disease extends, give the stimulant expectorants, and in the latter stages quinine and carb. ammon. in large and frequent doses. I never use calomel. During convalescence I use chlorate of potassium and quinine; liquid nourishment from the beginning. The room should be moderately warm, and not too much covering allowed. I have treated thirteen cases on the above plan, and lost two.

Dr. Cathell. Smith says this disease is very fatal under any treatment. He recommends turpeth mineral and condemns calomel. In my cases I rely much on moisture. I have the room saturated with the steam from lime water. Internally I give iodide of potassium in large and frequent doses.

I think it is the most reliable remedy we have, and by it I have rescued children that were apparently moribund. In one case I gave eight grains every hour for twenty-four hours, and the child got well. I can recall five cases, in which death seemed certain, which got well after its use. In any case of croup I order two grains every two or three hours, and have not had a case pass into the membranous form since I began its use.

Dr. Evans. I would emphasize the use of potass. iod. I got the idea from its effects in asthma. I never use emetics; think they depress and do no good. I combine the iodide with bromide of ammonium and syr. senegæ and use in large doses. I have had three cases in the last ten days and they all got well under this treatment.

Scarlatina.

Dr. Brinton. I do not believe that scarlatina and diphtheria are identical, yet it has been my misfortune to lose a number of cases of scarlet

fever this winter, and nearly every case died from diphtheritic patches on their tonsils and fauces and false membranes in the air passages, forming what I call diphtheritic croup. Is this diphtheria engrafted upon scarlatina or not?

Dr. Bates. I look upon it as diphtheria attacking a child debilitated by scarlatina. We may see the same condition after any exhaustive disease, and we know that diphtheria may be the sequela of exhaustion, however produced. I lost one case from the same causes as described by Dr. Brinton. I know our president considers scarlet fever and diphtheria identical, but I think he is in error in so considering them.

Lumbago.

Dr. Reynolds. I wish to call attention to the use of the uterine pump as a substitute for cups, etc., in producing counter-irritation. I have used it in a number of cases of lumbago, muscular rheumatism, acute pleurisy, pain over ovary from chronic inflammation or irritation, and found it an efficient agent.

Dr. Morris. I have used it in uterine congestion and found it very useful.

Embolism.

Dr. Morris. A lady had been suffering for weeks from chronic malarial poisoning, but not so severely as to make her keep her bed. On last Tuesday labor took place and I delivered her of a small fœtus. Next morning she complained of dark spots on her neck. About ten hours after delivery I was sent for and found her dying. She had great dyspnœa and intense pain over the prœcordia and died in one hour and a half.

Traumatic Tetanus.

Dr. Caldwell. A lady, twelve or fourteen days after miscarriage, was attacked by tetanus. The temperature was 107° to 108°; pulse 160; died in three days. Morphia, chloroform, calabar bean, etc., were used without benefit. Fortunately for the obstetrician these cases are very rare.

Rheumatism.

Dr. Evans. I wish to call attention to the use of large doses of quinine in the treatment of acute rheumatism. Lately I had a case in which the temperature was 110°, pulse 140. Large doses of quinine were used, and the patient recovered.

Nasal Catarrh.

Dr. Hamill. A man for five years had suffered from nasal catarrh. Almost everything had been tried without benefit, when he was recommended to plug the nostrils alternately with cotton. He found great relief from this simple treatment, and I call attention to it, so that others may try it.

Dr. Cathell. I have tried it and found it beneficial. I got the idea from a little article going the rounds of the press. A German was the originator, and had used it in fifteen cases; all got well; average duration of treatment twenty-one days. I have used it for about one year, and know of no case which has not been cured or greatly benefited. It gives rest to the irritated membrane. I do not use it in ozæna.

Dr. Arnold. A lady, nineteen years of age, two and a-half years ago had diphtheria, and as a result there was complete loss of voice. She could not speak above a whisper. She was treated by several specialists without benefit. She came under my care about four months ago. It could be seen, by the laryngoscope, that upon pronouncing a or e the right vocal cord came down well, but the left cord could not be seen. I concluded that there was paralysis. There was chronic catarrh of the mucous membrane covering the cartilage of Santorini; it was injected and thickened, but this would not account for the loss of voice. I was very cautious in my prognosis. I used a very weak interrupted current, one pole being applied over the lateral part of the thyroid gland and the other one near to it. A brush dipped in cold water was run down the throat, to produce mechanical irritation. After five weeks' treatment, with daily applications at first, she could speak distinctly. She then contracted a severe cold and again lost her voice. In about six weeks treatment, was resumed. She can now talk in an ordinary tone distinctly, and can sing. Upon examination with laryngoscope the left cord comes down distinctly but not enough to produce the chink, and does not stay down long enough, which shows that the paralysis is not entirely gone. Electricity is applied every day for fifteen minutes. All the letters are pronounced distinctly, except u and sometimes i. She has been ten weeks under treatment. Erb recommends this mode of applying electricity, while Mackenzie and others recommend internal application. She formerly had much pain in the neck and back of the head, whenever she made an effort to speak.

Dr. Billingslea. I have seen the internal application of electricity in two cases. In one the lady could not speak at all, and in the other the voice was lost for eighteen months. They were both cured.

Dr. Reid. Would not electricity give permanent relief in cases of hysterical aphonia?

Dr. Arnold. Frequently not.

Dr. Reid. I treated one case of hysterical aphonia by this means. One application was sufficient and there has been no trouble since.

Pilocarpin in Diphtheria.

The effect of pilocarpin in diphtheria is, according to various German writers most admirable. Dr. Guttman (*Allg. Med. Zeit.*, October 9th) says, that given internally a free salivary discharge is established, by which the diphtheritic membranes are softened and dissolved; the inflammatory phenomena rapidly lessen and disappear; and the condition of the patient is speedily improved. Out of sixty-six cases, many of them severe, he *did not lose one*, and they all were cured in from twenty-four hours to three days!

EDITORIAL DEPARTMENT.

PERISCOPE.

Chlorate of Potash in the Hemorrhagic Diathesis.

In the *British Medical Journal*, October 30, 1880, Dr. Alexander Harkin urges the value of the chlorate in constitutional hemorrhages. We quote a few of his illustrative cases:—

Hæmophilia: Epistaxis.—A. B., aged 18, tall, of florid complexion, engaged in a large concern near Belfast, established for the manufacture of the textile fabrics for which that town is remarkable, suffered so much from a continual dropping of blood from the nose, caused by dust from the flax, that he feared he should have to relinquish the business. His family history is remarkable, his father having been subject to many and severe attacks of epistaxis, sometimes persisting, in despite of treatment, for a month at a time. Another member of the family suffered in the same way after the extraction of a tooth; a wound on the skin, as by shaving, giving rise to most troublesome bleeding. Having been asked by a friend, in the end of 1874, to prescribe, *in absentiâ*, I ordered a mixture, which was forwarded to him, containing an ounce of the chlorate dissolved in twenty of water, but with the addition of one drachm of the tinctura ferri perchloridi. A fortnight after the young man called to thank me for his cure. Nearly five years have since elapsed without a relapse, save on one occasion, when, having lost a train, he ran a distance of two or three miles, when a slight bleeding occurred, which was staunched by his pocket-handkerchief.

Hæmaturia Renalis.—W. McN., aged 25, a saddler by trade, living at Albert Bridge Road, Belfast, of very delicate constitution and deformed spine, and subject to lumbar pains, consulted me in July, 1868, for a very profuse discharge of bloody urine which had troubled him for many months, and for which he had been treated ineffectually by several medical men. The blood came in large quantities, mixed, but not suspended, in the urine, apparently from the kidney; the bladder was healthy and free from calculus, having been carefully sounded by my friend, Dr. Murney. I tried for a time a number of styptics, etc., in vain, among the rest the tincture of iron; when, on recurring to my favorite remedy, and joining to the iron the chlorate of potash in the usual dose, immediate relief was the result. For a period of twelve years the man was subject to periodical returns of the affection, perhaps twice in the year. His custom was to have the prescription renewed, generally without reference to me, and with the same happy result; he was thus enabled to continue at his trade and to assist his friends, until the month of August, 1875, when, having taken a long drive upon a rough road, the hemorrhage recurred with great violence, and the attack terminated fatally in ten days. I had not the opportunity for post-mortem examination.

Purpura Hemorrhagica.—I was requested by some charitable ladies, in the summer of 1865, to visit a factory-worker named Hagan, who lived at 58 Mary Street, Falls Road. She had been confined to bed for thirteen weeks, and been carefully attended by the dispensary doctor of her own and the Shankhill districts. I found her much exhausted by a continuous drain of blood proceeding from the gums, nose, bowels, vagina and bladder. She was profusely covered with purple maculæ on the chest, arms, legs and abdomen. Her diet had consisted for months exclusively of bread and tea, alternated with rice, with little milk, potatoes being scarce and dear, and not having any one to cook them. I advised a complete change of diet, and prescribed the usual mixture. When I called to see her, at the expiration of a week, she opened the door herself, quite recovered, all bleeding having ceased ere the mixture was finished. As a later example I may give the case of Sarah Flanagan, aged 12, an inmate of the St. Patrick Industrial School, Belfast, whom I visited on May 8th, 1878, suffering from bleeding from the nose and gums, her body being dotted freely with the characteristic purple spots. In her case two drachms of the salt, with thirty minims of the tincture of iron, effected a cure, every trace of the disease having disappeared within a week. Her diet was, of course, looked after.

Menorrhagia.—Miss L., a school teacher, aged 38, wan and feeble, very tall and delicate, consulted me for a discharge of blood, which had continued, with short intervals, after a menstrual period several months previous. She suffered from severe pain in the back, from palpitation and the other constitutional symptoms consequent on a continuous drain. She had tried various remedies prescribed by other medical men without effect. I advised relaxation from her duties for a time, and the chlorate and iron mixture. I saw her some days afterward; her color began to improve, the discharge diminished, and finally disappeared. The mixture was renewed and taken occasionally as a preventive.

Gastrotomy.

Dr. L. L. Staton, of Tarborough, N. C., reports, in the *North Carolina Medical Journal*, for October, 1880, a successful case of gastrotomy, performed on a colored boy, eight years of age, who was, when the doctor first saw him, almost dying of hunger, on account of a cicatrized stricture of the œsophagus, the result of drinking, by mistake, a large quantity of a solution of concentrated lye. The operation was performed by dividing the skin for two and a half inches, in a diagonal direction, from right to left, under the cartilaginous portion of the eighth rib and as near the sternum as possible, but a finger's breadth from the median line. The walls of the abdomen were then divided in the same line, when two fingers were introduced to examine for the stomach, which was found firmly contracted, about two

and a half inches in length and about one and a half inches wide, feeling like a fibrous tumor. After drawing the organ out through the opening made in the abdominal wall; an incision about three-fourths of an inch long was made, parallel with the long diameter of the viscus, near the smaller curvature. One end (the inner flange) of a hard-rubber tube was now introduced into it and the stomach returned within the abdominal cavity, the outer flange being secured by means of silver-wire sutures. From the tube leads a soft-rubber pipe, about one-half of an inch in diameter, with a hard-rubber mouthpiece attached, making an artificial œsophagus. The operation was performed under the antiseptic spray, and a sixth of a grain of morphia in solution was next introduced into the stomach through the tube, the opening of which was then closed with a cork. Nutritive enemata were administered, and two days after the operation four ounces of milk were forced through the tube into the stomach, by means of a syringe. In this way it was gradually dilated and began to absorb and digest food, while at the same time the enemata were continued. The boy has since increased in strength and in flesh, without any peritonitis or other inflammation. In feeding, after thoroughly masticating his food, he simply spits it through the tube into the stomach in a semi-fluid state. At last account, nearly five months after the operation, the patient was doing well.

Influence of Light on Nutrition.

The influence of light upon the nutrition of the animal body is a subject which appears to have received more attention from the practical physician than from the physiologist—at least in this country. There are few persons who do not believe in the hygienic value of abundant light as well as of fresh air; but it is difficult to point to other than pathological or negative evidence in favor of this opinion. We have now at our command definite physiological facts respecting the influence of light upon the excretion of carbonic acid in the lower animals. These are the results of investigations carried out by Moleschott and Fubini, (*Centralblatt, f. d., Med. Wiss.*, 1880, page 562). By carefully arranged experiments these observers were able to estimate, not only the comparative, but the absolute or quantitative effect of light upon amphibia, birds, and mammals, and to exclude from the result the effects of temperature and movement. The result was in all classes of animals so far the same—the admission of light to an animal which had been previously kept in the dark raising the amount of carbonic acid excreted from 20 to 40 per cent., and from 11 to 27 per cent. even when the animal had been previously blinded. It thus appears, as we should have expected, that light affects nutrition not only through the retina, but also through the skin. What is more remarkable is that the nutrition of the muscular system, after removal of the skin, central nervous system, and eyes, was found to be 50 per cent. more active in light than in darkness; while the brain and spinal cord similarly tested showed similar, though less marked, nutritive activity under the influence of light. Further experiments showed that blue-violet light exercises precisely the same influence on nutrition as mixed (white) light; while red light affects frogs similarly to darkness, although it stimulates nutrition to a moderate degree in birds and mammals. The individual tissues proved to be affected by colored light in much the same way as the entire body.

Recent Observations on Hemianæsthesia.

A recent number of the *Lancet* contains some interesting observations, made by M. Grasset, of Montpellier, and others. One was the case of a man who was suffering from left-sided hemianæsthesia, alleged to be of six years' duration, and in whom right-sided anæsthesia had been previously and unexpectedly removed by a blister applied for pleurisy. The loss of sensation is supposed by M. Grasset to have been due to an organic lesion of the brain, but its course and the circumstances of the previous attack of right-sided anæsthesia, render it difficult to accept this view of the nature of the case. The application of a blister over the deltoid was followed by the return of sensibility in the greater part of the limb. The restoration did not, however, return first in the neighborhood of the blister, but in the hand, and it extended as far as a little above the elbow, the neighborhood of the blister remaining insensitive. Another blister was then applied to the thigh, and was followed by a recovery of sensibility in the whole leg. The loss of sensation was thus reduced to the left half of the trunk, neck, and face.

M. A. Robin found some time ago that saturnine hemianæsthesia could be removed by the action of jaborandi, the diaphoresis appearing to be attended with a return of sensibility. The use of the drug was also suggested by a statement made by M. Grasset's patient, viz: that when he was anæsthetic on the right side he only perspired on the left. Accordingly six grams of infusion of jaborandi were given. Perspiration was equal on the two sides. Immediately afterward no change in sensibility could be discovered; but twenty-four hours later, after severe perspiration during the night, sensibility returned in the anæsthetic parts.

The mode of action of diaphoresis in removing anæsthesia is a subject on which there is considerable room for divergence of opinion. M. Robin suggested that it is by modifying the vascularity of the anæsthetic parts. M. Grasset, however, rejects that opinion, on grounds supplied by the further history of his patient, who presented the oscillation so often noticed in cases of functional disease. Six days after the recovery of sensibility just mentioned there was a partial loss of sensibility on the left side of the face, passing away on the following day. A little later he had another return of partial anæsthesia in the left thigh, between the hip and the knee, which passed off after free purgation. A few days later he had another attack of partial insensibility in the same region, disappearing after three days' duration, with spontaneous sweating. This anæsthesia was just in that part of the thigh to which the blister had been ap-

plied. Still later anæsthesia occurred in the left arm and hand, sharply but irregularly limited, not according to nerve-distribution. A mustard-leaf was applied to the back of the forearm, and left in position for more than an hour, causing abundant redness, but no immediate influence on the sensibility. A few hours later, however, sensation gradually returned, the recovery commencing at the upper part of the limb. Another attack of anæsthesia was quickly removed by the application of the magneto-electric apparatus.

On Antiseptic Inflation.

Mr. J. Holden Webb, of Melbourne, has recently published a paper in the *Australian Medical Journal*, describing and advocating a new plan of rendering old sinuses and putrid abscess cavities aseptic. At first such cases were dealt with by injections of carbolic acid lotion; more recently Volkmann has introduced his sharp spoons, by means of which the unhealthy granulation tissue forming the walls of such passages and cavities can be removed; and inasmuch as there is good ground for believing that septic organisms not only exist in the putrid discharge, but also infest the secreting walls of such cavities, this must be considered, and, indeed, has proved, a valuable adjunct to the simpler plan of injections only. In dealing with very large cavities, irregular and sacculated, such as are particularly met with in connection with disease of the spine, it is obviously very difficult, if not impossible, to inject fluid so thoroughly that it shall penetrate into every corner and exert its germicide property on every part; and in these cases, also, the use of Volkmann's sharp spoons is necessarily limited within very narrow bounds. It was for such cases that Mr. Webb tried inflation with carbolized air, as being more likely to give success. His apparatus is simple. Into a Florence flask he puts some crystallized phenol, and through the cork, which fits tightly, he passes two glass tubes, one passing to the bottom of the flask, the other only just beyond the cork. These tubes are bent at right angles just above the cork. To the long tube a Richardson's bellows is fixed. When in use the flask is raised on a stand, the acid melted and heated by a spirit lamp, and air forced by the bellows through the acid in the flask, and by the shorter tube into the cavity to be inflated. All the force of the hand is used in the inflation, the cavities being tightly distended, and although it "often makes the patient drowsy for some hours afterward, and sometimes renders the urine smoky," Mr. Webb has not met with any ill effects. Thymol inflation has been followed by disagreeable sickness. In his paper, cases of old sinuses, spinal and other abscesses, submitted to this treatment, are detailed, and it is stated that the results in correcting septicity of discharge, and therefore in checking suppuration, fever, and hectic, and hastening recovery, have been very satisfactory.

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REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITERATURE.

——Dr. Charles James Fox, of Willimantic, sends us an essay on "Chrysophanic Acid as a Remedy in Diseases of the Skin," which was read before the Connecticut State Medical Society, May 1880.

BOOK NOTICES.

On the Use of the Cold Pack, Followed by Massage, in the Treatment of Anæmia. By Mary Putnam Jacobi, M.D., and Victoria A. White, M.D. New York, G. P. Putnam's Sons, 182 Fifth Avenue, 1880. Cloth, 8vo, pp. 76. Price $1.25.

This volume is a reproduction in book form of a series of articles which have appeared in recent numbers of the *Archives of Medicine*. The observations made and the conclusions arrived at by the authors are based on a careful study of eleven cases of anæmia, some of which were more or less complicated by uterine and nervous disorders. It was found that the cold pack invariably increased the rapidity of tissue metamorphosis, as shown by a marked increase in the elimination of urea during the hours of the pack. This was followed by an increase in the appetite, weight and strength, the improvement being, however, less marked in those cases in which there was a nervous complication. Iron was administered in small and frequent doses (ferri and pot. tart. gr. j every hour). This the authors regard as a valuable remedy in conjunction with the pack and massage, but often insufficient by itself, as, in several of the cases recorded it had been taken for a length of time without the least benefit. The work is characterized throughout by scientific accuracy and philosophical reasoning, which is quite refreshing to find in the writings of women in these days of hasty generalization, when men search for facts to prove their theories, and frequently jump at conclusions from carelessly conducted experiments.

The information to be gained from this book will more than repay its persual. The adoption of the decimal system of weights in general, while the old system has been retained in some cases in speaking of doses, has led to some confusion; thus we are informed, on page 27, that "the patient was ordered tartrate of iron and potassa, three grams every three hours," when three grains undoubtedly must have been meant.

THE

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NEW EXPERIMENTS IN HYPNOTISM.

In a previous number of the REPORTER we have referred to the experiments in reference to the mesmeric condition carried on during the last year at Breslau, by Professors HEIDENHAIN and GRÜTZNER. At the last meeting of the German Association of Naturalists and Physicians, the latter gave an exhibition of this hypnotic condition. He chose twenty young people, scholars in the High School, seated them in two rows, and put in the hands of each a button of cut glass. They were instructed to look steadily at this button and to think of nothing at all. After five minutes he chose one and stroked him gently down the head, arms and breast. This he did to each of them three times, perfect quiet being enjoined. He would then ask one whether he was asleep or not. Out of the twenty some three or four were found to be appropriate subjects.

Such subjects would remain in uncomfortable positions when so placed; others would obey blindly the directions of the operator, while others again would be controlled by hallucinations of sight, hearing, taste or smell.

According to the report of those present, who embraced a number of the most scientific men of Germany, there is no room whatever for doubting that the condition exhibited is a strictly physiological one, and all possibility of simulation is out of the question. A discussion took place on the subject, without, however, throwing any additional light on the true theory of this phenomena.

In the course ot his remarks, Prof. GRÜTZNER stated that in the numerous experiments that he had performed he had observed the following fundamental types of hypnotism:—

1. A condition of peaceful sleep with consciousness and sensibility intact, in which the hypnotized person is merely unable to open his eyes. This condition is most frequently observed in weak persons and girls.

2. A condition chiefly characterized by rigidity of the muscles, either of the whole body or of a single limb. This is more frequent in strong subjects, as gymnasts, soldiers, etc. The muscles can be so stiff, for example, that a subject will sit in a chair and stretch out a leg so fixedly that a person can be supported on the foot for a considerable time, a feat wholly impossible in ordinary conditions. Such subjects cannot walk well nor speak well, on account of the stiffness of the muscles of the limbs or throat.

3. A condition of automatism, in which the subject renders absolute obedience to the orders of the operator. Frequently the subject is aware that the orders are disagreeable, but he cannot refuse to obey them.

4. The condition of hallucinations. This is more rare than the previous forms, but when present may be carried to any extent.

Prof. Grützner also discussed the question whether these experiments are dangerous to the subjects. The late Prof. Bennett, of Edinburgh, decried them severely; Prof. G., on the other hand, says he has never seen any bad effects result from them, except that they fall into this condition much more easily. For example, one of his subjects happened to look fixedly at a black bean in his soup, and forthwith fell into a trance. His comrades thought he was dead, but

he was immediately restored by blowing in his face, which is the most prompt means to break up the mesmeric sleep.

Several observers present stated that mesmerized persons developed faculties unknown to their waking hours. For example, one pronounced the most difficult sounds in foreign tongues, which he could not at all do when awake. Another, Dr. Cohn, of Breslau, has proven that persons who are color blind can distinguish colors correctly when hypnotized; and, on the other hand, some who are not color blind become so when under this influence. It is quite possible to hypnotize a single eye and leave the other normal, so that the subject will be color blind with one eye and not with the other.

Although facts akin to these have been known to the profession for a century, they have never received the attention from scientific students which they merit. They have been relegated to charlatans and considered beneath the dignity of the learned. This is surely a great error. A thorough classification and analysis of these nervous displays might very probably lead to important results in neurology and mental science. We commend them to the attention of students of these branches.

Notes and Comments.

Therapeutical Notes.

MIST. IN CHLOROSIS (SIREDEY).

℞.	Ferri citrat.,	℥j-gr. xv	
	Potass. bromid.,	℥ iiss	
	Vini xerici,	℥ viij.	M.

Fiat mist.

SIG.—Tablespoonful before meals.

PILLS IN HEMICRANIA (DEBOUT).

℞.	Quiniæ sulph.,	gr. 1	
	Digitalis pulv.,	gr. xxij	
	Syrup. simp.,	q.s.	M.

Ut fiat pil. No. xxx.

SIG.—One at bedtime for three months.

The Detection of Organisms in Water.

It is often a difficult task to discover microscopic organisms in water. Fortunately some chemical re-agents kill these organisms without changing their appearance; osmic acid is of especial value for this purpose. Once destroyed, they sink to the bottom, and if enough of the liquid has been employed, they may thus be collected in appreciable quantity. The value of this method is shown by the following experiment. If a test tube be broken, and the water it contained be contaminated by dipping into it the extremity of a rod which has been placed in an infusorial liquid, and it is then treated with osmic acid, the organisms will be found intact, and with readiness by the aid of a microscope. In the examination of water may be used a one-and-a-half per cent. solution of osmic acid. One cubic centimetre of this solution will suffice for thirty or forty centimetres of water, all animal and vegetable organisms being by it rapidly killed and fixed. In a few minutes, in order to lessen the blacking action of the osmic acid, as much pure water as the test tube will hold is added. In certain waters rich in organisms the microscopical examination may be made in a few hours. If the water be comparatively pure, twenty-four or forty-eight hours must be allowed to pass. The liquid, with the exception of the last one or two centimetres, may then be decanted. The detection of the organisms in the residue is facilitated by the employment of coloring agents, such as picrocarmin, methyl violet, and logwood.

Atropia in Chloroform Narcosis.

We find this subject but casually referred to in treatises on anæsthetics. It has, however, been worked out by Professor T. R. Fraser, of Edinburgh, who has shown atropia to be a cardiac stimulant, advisable when chloroform is to be given. It stimulates the heart, not only indirectly, by lowering the conductivity of the cardiac terminations of the vagi, and thus, of course, diminishing their inhibitory power, but also directly by stimulating the intra-mural motor ganglia of the heart; and possibly, also, by raising the excitability of the accelerator nerve to the heart from the cervical sympathetic ganglia; and perhaps it may even stimulate the cardio-motor centres in the medulla oblongata. Dr. Fraser considers it advisable to combine with the atropia a little morphia, say $\frac{1}{120}$ to $\frac{1}{60}$ of a grain of sulphate of atropia, *i. e.*, one to two minims of liquor atropiæ sulphatis (*B. P.*), and one-twelfth to one-eighth of a grain of acetate or hydrochlorate of morphia. These are injected about fifteen or twenty minutes before the administration of chloroform is begun; and by this means, (1) not only is the patient in a less nervous state when the inhalation is commenced, but (2) less chloroform is required, and, (3) moreover, a very objectionable evil is got

rid of, or, at all events, ameliorated, viz., the emesis which is apt to occur with chloroform.

Motor Nerves of the Eyes; Their Origin.

In the *Gazette des Hôpitaux* M. Math. Duval reports the following observations as to the origin of the oculo-motor nerves. The nuclei of the origins of the fourth and sixth pairs of cranial nerves are connected together by bundles of fibres, the arrangement of which explains the complicated physiology of the associated ocular movements. A very marked bundle goes from the nucleus of the third pair to that of the sixth of the opposite side; thus we can understand the simultaneous contraction of the right internal rectus and the left internal rectus and inversely. This bundle is double in the ape; one of its branches enters the nucleus of the patheticus. This nerve, therefore, takes its origin partly from the muscles of the external motor oculi; hence there is nothing astonishing that it enervates a muscle rotating outward, such as the superior oblique. In movements of lateral inclination of the head, this nerve acts simultaneously with that of the inferior oblique of the opposite side, but in an inverse sense. But the nucleus of the patheticus blends itself with the posterior part of that of third pair, the point of origin of the motor oculi communis, which innervates the inferior oblique and the patheticus itself, decussating in the valve of Vieussens, passes to the superior oblique of the side opposite to that on which it seems to rise The simultaneity of action of the two oblique muscles in question is thus explained by the community of origin of their different nerves.

On Ergot in the Intestinal Hemorrhage of Typhoid Fever.

In a memoir on the above subject (*Journal des Sciences Med. de Louvain*, September, 1880), M. Flandrin first considers the period of production and causes of the hemorrhage; generally coming on from the twelfth to the twenty-fourth day; it is much more dangerous coming on late in the disease; out of twenty-three cases of early hemorrhage (*Dubuclet, Thèse de Paris*, 1872) but three deaths occurred, while the same author found that twenty-two deaths resulted in twenty-two cases of late hemorrhage. The cause of the hemorrhage is primarily the fluidity of the blood, together with the ulcerations affecting the vessels of Peyer's patches, and the fatty degeneration of these same vessels; the proximate causes are premature alimentation, cold baths, or some muscular effort on the part of the patient.

The quantity of blood lost is often very large, and all the symptoms of collapse usually coming on after great losses of blood, such as pallor of the face, fall of temperature, frigidity of the extremities, and thready, accelerated pulse, may come on before blood appears at all in the stools.

A notable but evanescent amelioration occurs frequently just after intestinal hemorrhage, and Trousseau and Graves regarded it as a critical symptom of favorable augury, and did not favor its arrest; an exactly opposite opinion has been held by Murchison, Griesinger and Jaccoud, who earnestly recommend active and immediate remedial action.

The good results obtained from ergot have been principally made known by Murchison; it may be administered in any form, but principally hypodermically in form of ergotine.

In four cases of abundant hemorrhage occurring in the service of M. Sée, at the Hotel Dieu, and particularly in one very severe case, complicated with hæmatemesis and purpura, which had not been benefited by perchloride of iron, or spirits of turpentine, or formiate of soda, after the first day of ergotine injections (about one grain at a time) a notable amelioration was observed, and after the second the hemorrhage was arrested and did not return.

Conservative Treatment of Sympathetic Ophthalmia.

M. Bouchut in the *Gazette des Hôpitaux* observes that sympathetic ophthalmia is most probably produced by transmission through the ciliary and optic nerves, and proposes the section of these nerves, as a substitute for the enucleating method. The operation was successfully performed on dogs, cats, and even rabbits, experimentally, the eye whose nerves had been cut being retained.

The operation consists in making a slight incision in the conjunctiva, severing the tendon of the external rectus muscle, and passing behind the eyeball with scissors sharply curved on the flat. The eye being drawn forward and turned inwardly, the optic nerve is put on the stretch, seized between the blades of the scissors and cut, together with the ciliary nerves. The eye is rotated still further in the same direction for examination, to insure the section of all the nerves, then the muscle is replaced, sutured, and an antiseptic dressing employed.

Optico-ciliary neurotomy, as the author calls it, has been performed in more than forty cases successfully, and is said to be an acquisition to conservative surgery.

Treatment of Chronic Cystitis.

In a very complete article on "Chronic Cystitis," in the *Dictionnaire Encyclopédique, des Sci. Med.*, M. Chauvel indicates the following preparations:—

℞. Turpentine, ℥ ss.
Camphor, gr. xv
Ext. hyoscyamus, gr. ½. M.

Sig.—The ingredients are to be well mixed, and a piece the size of a cherry stone taken morning and evening.

Thompson frequently prescribes, with success, an infusion which he had seen an American use with benefit. It can be given in all forms of chronic cystitis:—

℞. Uvæ ursi fol., ℥ j-ij.
Pareiræ. bravæ. rad. ℥ j-ij. M.

Sig.—Boil in a quart and a-half of water to a quart. Take from f. ℥ ij to f. ℥ iv, four or five times a day.

M. Gosselin recommends benzoic acid, to prevent the development of ammonia. He gives at first 15 grains per diem, gradually increasing to 60 and even 90 grains, without causing any trouble, save a slight parching of the throat. This treatment generally neutralizes the acidity of the urine after seven or eight days.

Convenient Decalcified Bone Drainage Tubes.

The use of drainage tubes made from decalcified bone is not new, but is growing in favor. A convenient method of obtaining them is suggested by a correspondent of the *Lancet*, Oct. 30th, 1880. He writes:—

In the long bones of the limbs of poultry and small birds I have found capital drainage-tubes ready turned to hand. The bones, collected by the cook and well boiled, to free them from the soft parts, are soaked for about ten hours in a mixture of one part of hydrocholoric acid and two parts of water. Immersed for this time, they become sufficiently soft and flexible for use, and to be cut with ordinary scissors. The ends of the bones are now cut off with a pair of scissors, and the medullary canal well cleaned out with a thick wire or rat-tail file. The bone tubes should then be boiled in a five per cent. solution of carbolic acid, to which some borax—an antiseptic procurable in every store at a very cheap rate—has been added. The tubes are to be kept in a five per cent. solution of carbolic oil. If the ends of the bones are cut off with bone-nippers before being decalcified, they are very liable to split. If soaked too long in acid, the walls of the bone tube become too soft and gelatinous, and the lumen is liable to be closed by the pressure exerted by the edges of the wound into which the tube is inserted.

The Varieties of Vaccinal Eruptions.

A report on these eruptions was presented last summer to the Paris Academy of Medicine, by Dr. Hervieux. He classifies them as follows:—

1. Vaccinal eruptions are of two kinds: those caused by accidental inoculation, as by the nails, accidental pricks with the vaccinating instrument, etc.; and those resulting spontaneously, as in the exanthemata, from general infection the system.

2. Spontaneous vaccinal eruptions may be primary, appearing simultaneously with the vaccine vesicle proper; or they may be secondary developing at a later period, usually the ninth or eleventh day. In the first case the eruption presents the same character as the ordinary vaccine vesicle; in the second case it assumes very various forms; erythematous, miliary, vesicular, papular, etc.

3. In patients subject to eczema, impetigo, or chronic diseases of the skin, the vaccinal eruption, generally mild and discrete, readily takes on a graver character, becomes confluent, and is generally limited to the parts affected by the cutaneous disease.

Correspondence.

Alcohol in the Blood.

Ed. Med. and Surg. Reporter.

Perhaps the following notes may be of interest to some of the brethren, as exhibiting the impermanency of the admixture of alcohol and blood, and in that much proving the inutility of alcohol as food. They—the notes—were given me by the son of Mr. G., whose veracity is undoubted:—

James G., aged 45 years, an habitual periodical drinker, was accustomed to get on a spree every six or eight weeks, and would continue drinking for two or three weeks, when he would commence to sober up, at which time—as he claimed, to assist the sobering—he would have himself bled freely from the arm. At one of those bleedings, his son—my informant—holding the vessel to receive the blood, was struck by the odor of the blood being so strongly alcoholic, and concluding to see for himself if it was alcohol *in* the blood, he set the vessel containing the blood aside for a couple of hours, when there was found floating upon the coagulated blood a liquid resembling alcohol, and which burned with the characteristic flame of alcohol. I do not remember to have ever seen an account of free alcohol being found in the blood, and as this so nearly approaches it, I report it for what it is worth.

L. J. Collins, M.D.

November 22, 1880.

News and Miscellany.

Meeting of the American Public Health Association.*

FIRST DAY.

The Association met, December 7th, in Grunewald Hall, New Orleans, Dr. John S. Billings, of Washington, in the chair. Over four hundred members were present. The opening prayer was made by Rev. J. N. Galleher, Bishop of Louisiana.

After the election of new members, two papers were read on abattoirs, by Dr. Devron, of New Orleans, and Dr. Bushrod W. James of Philadelphia.

Dr. Smith, of the United States Army, read an interesting article on the Texas cattle fever, which, after a brief discussion, was laid aside to receive the report of the Committee on a Plan for the Prevention and Limitation of Contagious Diseases.

Dr. Albert L. Gihon, Medical Director U. S. Navy, read the report, which closed with the following resolution, which, after some discussion, was adopted:—

"*Resolved*, That the American Public Health Association earnestly recommend the municipal State Boards of Health to urge upon the Legislative bodies of this country the enactment of a law constituting it a criminal offence to knowingly communicate by any direct or indirect means a contagious disease, such as smallpox, scarlet fever, or venereal disease, and giving to said Boards of Health, and to the State and municipal health officials under their control, the same power in the prevention, detention, suppression, and gratuitous treatment of venereal affections which they now possess in the case of smallpox and other contagious diseases."

A paper on the storm water question in relation to sewage, was read by Col. Geo. E. Waring, of Rhode Island. The Colonel contended, in his paper, that the plan of getting rid of storm water in cities and towns, by means of deep sewers was objectionable and pernicious to health, because of the organic matter passing through them, much of which is left near the man traps and at corners of the streets. He proposed, as a remedy, that the gutters be so constructed as to allow all the storm water to pass without interfering with traffic.

Dr. White, of Milwaukee, was satisfied that sewage proper should be kept distinct and separate from storm water, not only on the score of economy, but so as to reduce the amount of sewer gas which originates from putrefying matter in the sewers. He said that New Orleans could get rid of its sewage proper by means of wooden pipes that could be laid in the water, leaving the storm water to flow in the gutter as at present. A paper upon the action of muddy water upon sewage was read by Prof. Brewer, of New Haven.

Dr. Walcott read a paper written by Dr. James Rane, of Brooklyn, N. Y., on the prevention of certain contagious diseases by the Local Boards of Health. The paper was one of great length, and discussed thoroughly the means that had been adopted by the Board of Health in his city.

SECOND DAY.

Early in the session a discussion ensued upon the report made yesterday by Dr. Gihon, at the close of which the following resolution was adopted:—

Resolved, That the Executive Committee be instructed to communicate with the State and municipal Boards of Health throughout the country, and supply them with a copy of the report of the Committee on the Prevention of Venereal Diseases, and request their coöperation in the attainment of the objects of the resolutions submitted by the Committee and adopted.

The following resolution was also adopted:—

"That a committee of five be appointed to prepare and recommend measures for the more efficient management and control of future epidemics, especially for the training, selection and employment of skilled and trustworthy nurses."

Dr. Billings read the report of the Advisory Committee on national sanitary legislation. The report gave an account of the proceedings taken by the Advisory Committee during the past year. The first portion treated of the sanitary bills before Congress, especially bills relative to the International Conference on quarantine, and the bill to increase the efficiency of the National Board of Health. The National Board had no desire for increase of power over quarantine, but were willing to await the result of the International Conference. The Advisory Committee are of the opinion that it is not desirable that the Association should recommend any change in the existing legislation affecting the National Board of Health, but advise that Congress should be recommended to make suitable appropriations for the work of the National Board, and authorize the prompt publication of the reports. The Advisory Committee suggested for consideration the subject of the adulteration of foods and drugs by the International Quarantine Conference which assembles in Washington next month. The report was received and adopted.

Dr. G. B. Thornton, of Memphis, read an interesting paper on the "Sanitation of Memphis," showing the improvements made in its sewage system, street paving, cleaning, etc.

Col. Waring, who spoke on the subject, said the Memphis system, in its general features, could be applied to New Orleans. A paper on the "Valuation of Sanitation," from an economic standpoint, prepared by Col. Keating, of Memphis, was also read.

A paper on the "Sanitary Urgency of the Florida Ship Canal," by Prof. Jno. Gamgee, of Washington, D.C., was read. The paper claims that the shutting of this canal would prevent the introduction of yellow fever into New Orleans, that is now brought by ships passing through the Carribean Sea.

A paper on "Sanitation of Emigrant Ships," written by Dr. Turner, of the United States Navy, was read by Dr. A. L. Gihon. The paper concluded with a suggestion that, as most of the

* We are largely indebted for this report to the efficient pen of Mr. Coleman, special correspondent of the *Public Ledger*, of this city.

emigrants are brought to our shores under foreign flags, an International Congress be had, in order to secure all the benefits that the sanitary science of the day presents.

Interesting papers on "Dengue, or Breakbone Fever," were read by Dr. D. C. Holliday, of New Orleans; Dr. G. G. Thomas, of Savannah; T. P. Porcher, of Charleston, and Dr. Hoilbeck, of the same city. Dr. Burns, of New Orleans, read a paper on the "Fever of the Lower Coast."

In the evening, Dr. Hunt, of Trenton, N. J., read a paper on "Epidemics;" Hon. Jno. Eaton, of Washington, on "Sanitation and Education," and Dr. Elisha Harris, of N. Y., one on "Domestic Pestilences."

THIRD DAY.

The Public Health Association commenced its third day's proceedings at 10 o'clock. A resolution was adopted, that the Advisory and Executive Committees take under consideration the advisability of establishing a national museum of hygiene; also one commending the organization of auxiliary sanitary associations.

The following officers were elected for the ensuing year:—President, Charles B. White, M.D., of New Orleans; First Vice President, R. C. Kedzie, M.D., of Lansing, Michigan; Second Vice President, Henry F. Campbell, M.D., of Augusta, Ga.; Secretary, Azel Adams, Jr., M.D., of Massachusetts; Treasurer, J. Berrien Lindsay, M.D., of Nashville, Tenn. Executive Committee: Dr. D. C. Holliday, of New Orleans; Dr. E. M. Hunt, of Metuchen, N. J.; Dr. George M. Sternberg, of U. S. A.; Dr. E. L. Griffin, of Fond Du Lac, Wis.; Dr. J. R. Thomas, of Savannah, Ga.; Dr. Thos. F. Wood, of Wilmington.

The following papers were then read, "On the Relations of Schools to Diphtheria," by Dr. Baker, of Michigan; "On Municipal Sanitation as practiced in Mobile," by Dr. Scales; "On the Results of Attempting to Check the Spread of Smallpox in Chicago," by Dr. Dewolf; "On the Relations of Certain Filth Diseases to Cold Weather," by Dr. Dell, of New York. Papers were also read by Dr. Atchinson, of Tennessee; Prof. Chaillé, of New Orleans; and Hon. Erastus Brooks, of New York.

FOURTH DAY.

After prayer and election of new members, the following resolutions, presented by the Executive Committee, by Dr. Harris, of New York, were adopted:—

Resolved, That this Association recognizes and earnestly commends the efforts of the National Board of Health to secure practicable laws of uniformity for the nature and nomenclature of diseases and causes of mortality, and again urges upon all State and local boards of health and upon other public authorities, the medical profession and all members of this Association, to do whatever they can to promote such uniformity and thoroughness.

Resolved, That a committee of three members be appointed to have this subject under consideration, for the purpose of reporting progress and plans relating thereto at the next annual meeting, in coöperation with the National and State Boards of Health, and with the medical and statistical bodies that have this subject under consideration.

Resolved, That systematic sanitary surveys and inspection are essential aids to successful public health works, and to the progress and application of sanitary science; therefore this association urge upon such local authorities the importance of such surveys, and the sanitary maps and records that pertain thereto, and also would recommend that the registry of prevalent diseases and mortality be made, as frequently as practicable, so coördinate therewith as to disclose the presentable causes which need to be removed.

Resolved, That the contagiousness of diphtheria is so established, that that disease should in all cases be treated with the same rigorous isolation and quarantine that is everywhere enforced against smallpox.

Resolved, That as we know little or nothing of the origin of diphtheria, we will request the National Board of Health to continue its investigation into the causes of this disease.

The following, offered by Dr. Henderson, of Kentucky, were agreed to:—

WHEREAS, There are annually occurring in our own large centres of population, and frequently in the provincial districts, numbers of cases of sickness and death from smallpox; and,

Whereas, the only certain method of restraining and preventing this loathsome disease is by vaccination and re-vaccination; therefore, be it

Resolved, That the boards of health of the several States in the Union, or, where no State boards of health exist, the State Medical Society, be requested to take the matter under immediate advisement, and direct the attention of all local boards of health to the importance of vaccinating all persons in their respective districts not previously vaccinated.

Resolutions were also adopted providing that for the better protection of public health, the Legislatures of the several States be invoked to enact measures imposing severe penalties against any person who, while suffering from any dangerous contagion or infectious disorder, willfully exposes himself, without proper precaution against spreading the said disorder, in any street, shop or other public place, without the persons so diseased shall notify the owners of buildings, or conductor or driver of vehicles or other conveyance that they are so suffering; also to impose a penalty upon any person who, being in charge of any one so suffering, shall willfully and knowingly expose such sufferer.

Professor Chaillé, of New Orleans, read an interesting summary of the conclusions of the Havana Yellow Fever Commission. After a discussion upon the paper relating to Yellow Fever, Dr. White, of New Orleans, the newly-elected President of the Association, was introduced and returned thanks, soon after which the Association adjourned.

The Quarantine Convention.

This Convention met each day, after the adjournment of the Public Health Association. It

was composed of delegates from some of the Western States, and those along the Mississippi Valley, and assembled for the purpose of discussing subjects vital to sanitary and commercial welfare. In addition to the delegates sent directly to this Convention, a number of the members of the Public Health Association were present by invitation.

Dr. Jones, President of the Board of Health of this city, called the Convention to order. Governor Wiltz, of Louisiana, delivered an address of welcome on behalf of the State, and Hon. Mr. Patton, Mayor, on behalf of the city.

On the second day the Convention elected Dr. Geo. A. Ketchum, of Mobile, Permanent Chairman, Delegates from the following States answered to their names: Alabama, Texas, Mississippi, Tennessee, Arkansas, Kentucky, Georgia, Florida, Louisiana, Maryland, South and North Carolina, Missouri, Indiana and Ohio. After the Committee on Credentials had reported, a motion was made to include Pennsylvania as one of the States to be represented, but it was stated that no invitation had been extended to that State, and, therefore, they had no accredited delegates.

Among the questions submitted for discussion were: Of what shall quarantine consist; when to be established and for what period; against which ports or countries; what diseases shall be considered as infectious or contagious; what is the best method of disinfection for ships and their cargoes; necessity for the adoption and enforcement, by the different States of the Mississippi Valley, of a code on quarantine and sanitary measures, which would obviate many difficulties and misunderstandings, and greatly promote inter-State commerce and business relations.

On the last day the Convention adopted the following resolutions:—

Resolved, That the Chair appoint two committees, to consist of seven members each, one committee to represent the Atlantic and Gulf States, and one to represent the States of the Ohio and Mississippi Valleys, each committee to prepare a schedule of rules and regulations concerning those matters of quarantine and sanitation which are common to the States of each region respectively, and which schedule shall be submitted to each of such States for ratification and adoption, as the basis of action for the protection of the public health, no State to have more than one representative on either of said committees.

Resolved, That it is the duty of the general Government to defray the expense of all quarantine administration of this character, that is, which extends beyond the boundaries of a single State, and said committees are hereby authorized and instructed to take the necessary steps to secure adequate appropriations by Congress for this purpose, such appropriations to be disbursed and expended in accordance with the usual Treasury regulations concerning disbursements and expenditures.

The Sanitary Council of the Mississippi Valley, Held a meeting December, 9th. The Boards of Health of Wisconsin, Kentucky, Iowa, Illinois, Minnesota, Michigan, Tennessee, St. Louis and the National Board were represented in the Council.

Dr. R. C. Kedzie, of Michigan, gave a brief history of the Council, and stated that it was organized for the purpose of counseling together and arranging a definite plan of co-operation should events render it necessary to establish a quarantine.

After some discussion the following resolutions were adopted, after which the Council adjourned until next day.

WHEREAS, Experience has shown that measures of quarantine under the sole direction of local and State boards of health have not succeeded in protecting this valley from invasion from yellow fever; and whereas our people habitually view with distrust all announcements which are of a character to affect the commercial interests of the locality directly concerned;

Resolved, That, in our opinion, the general Government alone, acting through its constituted sanitary agents, should have the direction and control of national and maritime quarantine.

On Friday the following resolutions, submitted by Dr. J. H. Rauch, of Illinois, were adopted:—

WHEREAS, There is, unfortunately, a want of confidence with regard to the prompt furnishing of information by the health authorities of New Orleans, with reference to infectious and contagious diseases; therefore, be it

Resolved, That, in the opinion of this Council, it would undoubtedly tend to the restoration of confidence if the State Board of Health would request the National Board of Health to place an inspector at quarantine in New Orleans, who shall have access to the records of the Board of Health and be furnished every facility for obtaining reliable information with regard to all cases deemed suspicious, and especially with regard to yellow fever.

Items.

The Report of the meeting of the Public Health Association, has crowded out a quantity of correspondence, news, etc. These will appear at the earliest practicable opportunity.

MARRIAGES.

CRAWFORD—MAGEE.—At Martinsburg, Pa., December 1st, by Rev. W. J. Gieson, D.D., S. Morrow Crawford, M.D., of Youngsville, Pa., and Marian Magee, of Martinsburg.

HARBISON—BUCKWALTER.—On Wednesday, December 1st, 1880, at the residence of the bride's parents, Limerick, Montgomery County, Pa., by Rev. J. Neff, Dr. A. B. Harbison, of Spring City, and Jennie, eldest daughter of Harry Buckwalter, Esq.

DEATHS.

DIXON.—In New York city, on Tuesday, December 7th, Edward H. Dixon, M.D., in the 72d year of his age.

WILCOCKS.—In this city, November 10th, Alexander Wilcocks, M.D., in his 64th year.

WHITBECK.—On Wednesday night, December 8th 1880, Dr. J. F. Whitbeck, of Rochester, New York.